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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/590,009	08/21/2006	Hideyuki Kakuno	071971-0712	7083

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EXAMINER	
BORSETTI, GREG	
ART UNIT	PAPER NUMBER
4141	
MAIL DATE	DELIVERY MODE
05/02/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/590,009	KAKUNO ET AL.	
	Examiner	Art Unit	
	GREG A. BORSETTI	4141	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *21 August 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1 and 2* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1 and 2* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *21 August 2006* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *5/25/2007, 8/21/2006*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-2 are pending.

Information Disclosure Statement

2. The Information Disclosure Statement (IDS) submitted on 5/25/2007 is in compliance with the provisions of 37 CFR 1.97.

3. The Information Disclosure Statement (IDS) submitted on 8/21/2006 is in compliance with the provisions of 37 CFR 1.97.

Drawings

4. The drawings filed on 8/21/2006 are accepted by the examiner.

Specification

5. The abstract of the disclosure is objected to because "The sheet or sheets presenting the abstract may not include other parts of the application or other material." The abstract references the drawings, which is not in compliance with MPEP 608.01(b). Correction is required.

Claim Objections

6. Claims 1 and 2 are objected to because of the following informalities: The term MPEG should be accompanied with a full spelling of the acronym. Appropriate correction is required.

Claim Rejections - 35 USC § 112

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 1 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 1 cites an “offset” value where the value is not fully understood to what reference the “offset value” is compensating for. It is not defined in the specification, correction is required.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-2 are rejected under 35 U.S.C. 102(a) as being taught by Bett. (US Patent #6430534).

As per claim 1, Bett teaches:

- **a compression process of compressing a plurality of allocation tables used when searching for the number of quantization steps and storing a compressed table in a memory and a decoding process of decoding the number of quantization steps by using the compressed table stored in the memory, wherein:**
- [Bett, column 2, lines 65-67] discloses "A first aspect of the invention is a method to compress tables of linear quantization data used to digitally represent analog signals…" Furthermore, [Bett, column 4, lines 20-24] discloses "FIG. 1 is a flow chart providing an overview of the processes to decode the compressed quantized levels per subband tables to nbits, using nbits to read the audio samples from the input data stream and requantization of the audio samples read". Thus, Bett anticipates the instant application by showing that allocation tables of quantization steps are coded and decoded for compressing the information to be transmitted.
    - **a first step of converting each said allocation table by reducing each group of subbands sharing a pattern to one, said pattern representing a relationship between an index value and the number of quantization steps**
    - [Bett, column 1, lines 24-26] discloses "There are several methods of compressing the four quantization tables, one method is to compress each

table's row of data. Repeated rows are not encoded." Furthermore, [Bett, column 1, lines 32-34] discloses "These comprise thirty two values used to point to the start location of the row data stored in one of the two previously compressed tables." It would be obvious to someone of ordinary skill in the art that the 32 values that point to the start location of the row data are indices in accordance with the claim. Bett teaches the reduction of rows based upon repetition where the row contains index and quantization step information.

- **a second step of converting the converted allocation tables into a single first table by reducing each group of subbands sharing said pattern to one**
- [Bett, column 1, lines 26-29] discloses "also, if other quantization tables comprise the same row information as one previously compressed, then this table need not be encoded." It would be obvious to someone of ordinary skill in the art at the time of the invention that by not encoding duplicate tables, it would be an analogous step to converting the tables into a single table.
- **a third step of defining, in a second table, offset values each corresponding to one subband, which are used for referencing the first table**
- [Bett, column 1, lines 29-34] discloses "In this manner, the four quantization tables used in MPEG1 (Layer 2) can be compressed into two

tables. However, to recreate the original tables, an additional four tables are required. These comprise thirty two values used to point to the start location of the row data stored in one of the two previously compressed tables." The secondary tables provide offset values that point to the previous two tables and thus the first table.

- **the compression process stores the first and second tables, as the compressed table, in the memory and the decoding process includes:**
  - **a first step of obtaining an offset value by referencing the second table using a subband as a key**
  - [Bett, column 5, lines 4-10] discloses "FIG. 2 shows a flow chart for decoding number of bits per subband sample. With reference to FIG. 2, in order to determine which of the four compressed tables to decode, first the sampling frequency and bitrate (step 201) must be decoded from the audio stream header. This information is used to determine the value of sb limit and thus which of the four compressed quantization per subband tables to use…" Furthermore, [Bett, column 6, lines 42-44] discloses "The number of bits per audio sample is decoded for each of the thirty two subbands using a loop counter called sb being initialized to zero (step 202)." Each of the subbands is decoded and each selects a secondary table in accordance with the instant application. Each

subband is decoded so each is used as a "key" to determine an offset value in a secondary table.

- **a second step of referencing the first table using the offset value obtained in the first step to obtain the number of quantization steps from said pattern read out.**
- [Bett, column 1, lines 24-26] discloses “There are several methods of compressing the four quantization tables, one method is to compress each table's row of data. Repeated rows are not encoded.” Furthermore, [Bett, column 1, lines 32-34] discloses “These comprise thirty two values used to point to the start location of the row data stored in one of the two previously compressed tables.” The offset value in the secondary table is derived by the subband as shown in the rejection above and then further points to the starting location of the row data. The quantization data is then read from the compressed tables that are referenced.

As per claim 2, Bett does not specifically teach:

- **the second step of the compression process, the first table is further converted by using a bit allocation where each bit uniquely represents the number of quantization steps**

- It would be obvious to someone of ordinary skill that bits would uniquely represent an overall number, in this case, a number of quantization steps. Even in standard binary notation each bit uniquely represents a number.

Conclusion

9. Refer to PTO-892, Notice of References Cited for a listing of analogous art.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to GREG A. BORSETTI whose telephone number is (571)270-3885. The examiner can normally be reached on Monday - Thursday (8am - 5pm Eastern Time).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chameli Das can be reached on 571-272-3696. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Greg A. Borsetti/
Examiner, Art Unit 4141

/CHAMELI C. DAS/
Supervisory Patent Examiner, Art Unit 4141
Dated: 5/1/08